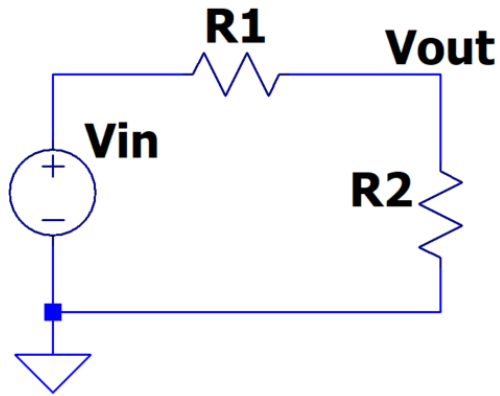


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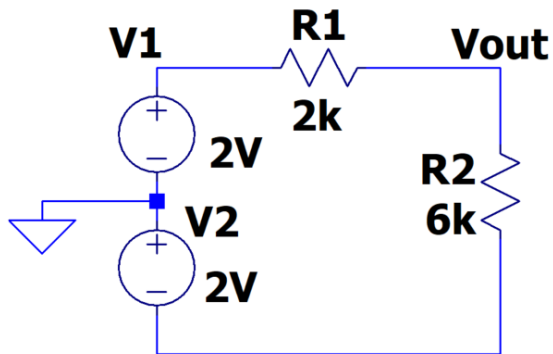
HW1

1. Prove: (10 points)

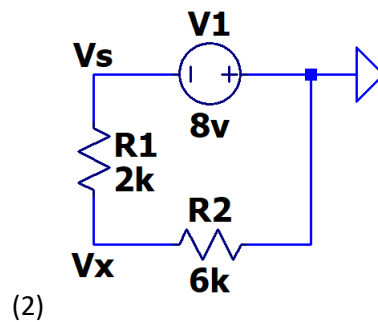
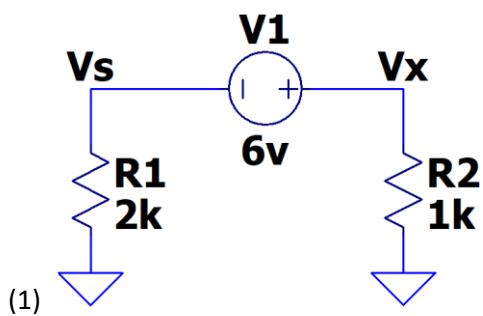
$$V_{out}/V_{in} = R2/(R1+R2)$$



2. What is the current direction and value in the following circuit? What is  $V_{out}$ ? (10 points)



3. Draw the current direction, calculate the current values, and calculate  $V_s$  and  $V_x$  in the following circuits. (20 points)



4. Find  $V_{out}$  (or maybe  $V_{out1}$  and  $V_{out2}$ ) in the following circuits. (60 points)

